

REMARKS

Favorable consideration and allowance of the subject application are respectfully solicited in view of the foregoing amendments and the following remarks.

Status of the Claims

Claims 9-16 and 18-22 are pending in this application, with Claims 9, 14 and 18 being independent. Claims 9-13 have been withdrawn from consideration. Claim 17 is cancelled herein without prejudice to or disclaimer of the subject matter contained therein. Claims 14 and 18 are amended herein to recite the feature that the concentration of ionic chlorine in the barrier layer is 100 ppm or less. Support for this amendment can be found in the specification at least at page 12, lines 8-11 and page 13, line 23 to page 14, line 4. Claim 22 is newly added. Support for the newly added claim can be found in the specification at least at page 13, lines 18-22. It is submitted that no new matter has been added by the amendments herein.

Section 102 Rejection

Claims 17 and 18 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Nakajima et al. (U.S. Patent No. 5,254,525). This rejection is now moot with respect to Claim 17.

The present invention, as recited in amended Claim 18, relates to an information recording medium comprising an electronic information storing circuit part and an ink-receiving layer, in this order. The recording medium further comprises a barrier layer that has a concentration of ionic chlorine of 100 ppm or less. The barrier layer is provided between

the electronic information storing circuit part and the ink receiving layer, so as to prevent ink applied to the ink receiving layer from reaching the circuit part. The claimed barrier layer prevents ink that remains on an image recording portion from coming into contact with the circuit part. Moreover, when the concentration of ionic chlorine, which is an impurity, in the barrier layer material is 100 ppm or less, corrosion of the circuit part is unlikely to occur. If the concentration of ionic chlorine exceeds 100 ppm, water in the ink causes sodium chloride or the like to dissociate and migrate, so that corrosion is likely to occur on a non-contact storage element due to chemical or electrical reactions. (See page 13, line 23 to page 14, line 4 of the specification.) In Applicants' view, Nakajima et al. does not teach or suggest the invention of Claim 18.

The thermal transfer recording-type ID card disclosed in Nakajima et al. provides a barrier layer between an image-receiving layer and a substrate. The purpose of the barrier layer is to prevent diffusion of dyes into the substrate and thus prevent dye blurs in the substrate. The Nakajima et al. ID card has two protective layers, a transparent protective layer and a substantially transparent setting protective layer, so that one cannot falsify information formed on the gradation-information bearing layer or character-information-bearing image layer. Applicants conclude that since the surface of the gradation-information-bearing image layer (on which recording has been conducted by sublimating colorants) is covered with the protective layers, the sublimating colorant apparently bleeds towards the substrate. Nakajima et al. mentions that the substrate may be provided with a circuit part. Applicants submit, however, that Nakajima et al. does not teach or suggest which side (back or front) of the substrate the circuit part is formed on, and thus, this reference does not teach or suggest the concept of using a barrier

using a barrier layer between an ink-receiving layer and a circuit part. Moreover, Applicants submit that Nakajima et al. does not teach or suggest that the concentration of ionic chlorine in the barrier layer material is 100 ppm or less. Therefore, Applicants conclude that Claim 18 is not anticipated by or obvious over Nakajima et al.

Section 103 Rejection

Claims 14-16 and 19-21 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Nakajima et al. in view of Hida et al. (U.S. Patent No. 4,841,134).

Amended Claim 14 relates to an information recording medium comprising an electronic information storing circuit part, a base material and an ink-receiving layer formed in this order. The recording medium further comprises a barrier layer between the circuit part and the base material, so as to prevent ink applied to the ink receiving layer from reaching the electronic information storing part. The concentration of ionic chlorine in the barrier layer material is 100 ppm or less. This barrier layer prevents water or acid/alkali in ink that remains on an image recording portion from coming into contact with the circuit part, which would cause deterioration of the circuit part. Moreover, when the concentration of ionic chlorine in the barrier layer material is 100 ppm or less, corrosion of the circuit part is unlikely to occur. If the concentration of ionic chlorine exceeds 100 ppm, water in the ink causes sodium chloride or the like to dissociate and migrate, so that corrosion is likely to occur on a non-contact storage element due to chemical or electrical reactions.

Applicants submit that Nakajima et al. does not teach or suggest a structure with a circuit part, a base material and an ink-receiving layer formed in this order, or suggest

providing a barrier layer between the ink receiving layer and the circuit part. Nakajima et al. provides a barrier layer between an image-receiving layer and a substrate in order to prevent blurred colorants in the substrate caused by diffusion of colorants in the image-receiving layer into the substrate. In contrast, for the recording medium as set forth in amended Claim 14, the barrier layer is provided between the base material and the circuit part to decrease the influence of components in the ink that adversely affect the circuit. Moreover, Applicants submit that Nakajima et al. does not teach or suggest that the concentration of ionic chlorine in the barrier layer material is 100 ppm or less.

The IC card disclosed in Hida et al. is provided with a reinforcing sheet that provides mechanical strength and flexibility to the card. Applicants submit, however, that this is not a teaching or suggestion of a barrier layer as claimed in the present invention that shields the circuit part from ink. Furthermore, the claimed feature of the concentration of ionic chloride in the barrier layer material being 100 ppm or less is not taught or suggested. Hida et al., therefore, does not remedy the deficiencies of Nakajima et al.

Applicants conclude that the combination of these two references, assuming that it is proper to combine them, does not teach or suggest the claimed invention. Accordingly, Applicants submit that Claim 14 is not obvious over Nakajima et al. in view of Hida et al.

Conclusion

Applicants submit that the present invention is patentably defined by independent Claims 14 and 18. The dependent claims are allowable for the reasons given with

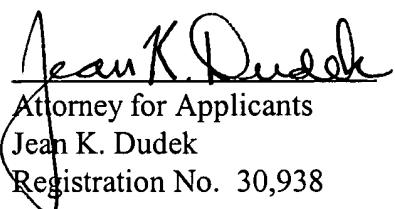
respect to their respective independent claims, as well as for the patentable features recited therein. Individual consideration of the dependent claims is respectfully solicited.

Applicants also respectfully request that this Amendment After Final be entered. This Amendment could not have been presented earlier as it was earnestly believed that the claims on file would be found allowable. Given the Examiner's familiarity with the application, Applicants believe that a full understanding and consideration of this Amendment would not require undue time or effort by the Examiner. Moreover, Applicants submit that this Amendment places the application in condition for allowance. Accordingly, entry of this Amendment is believed to be appropriate and such entry is respectfully requested.

Applicants submit that this application is in condition for allowance. Withdrawal of the above-noted rejections, rejoinder of the withdrawn claims and issuance of a Notice of Allowance are respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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